



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,068	06/20/2000	Vincent K. Jones IV	CISCP646	5487
26541	7590	08/23/2004		
RITTER, LANG & KAPLAN 12930 SARATOGA AE. SUITE D1 SARATOGA, CA 95070			EXAMINER JAGANNATHAN, MELANIE	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 08/23/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/598,068

Applicant(s)

JONES ET AL.

Examiner

Melanie Jagannathan

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9-11,13-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9-11,13-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Examiner regrets not informing Applicant in previous office action the following claim informality. Examiner would like to make clear this did not influence the finality of rejection in present office action.

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 21-22 of originally filed claim set had been renumbered 20-21.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,2, 4-7, 9-11, 13-16, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidl et al. US 5,732,113.

Regarding claims 1, 4-6, 9-10, 13-15 and 18-19, the claimed second node receiving a series of frequency domain bursts from first node, frequency domain bursts including training symbols is disclosed by OFDM transmitter sending RF OFDM modulated carrier to an OFDM receiver in a remote location. See columns 1-3. Synchronization of a receiver to an OFDM signal relies on the use of two OFDM training

Art Unit: 2666

symbols repeated every certain interval. See column 11, lines 59-67 and column 12. The claimed measuring interburst phase differences and determining wide frequency offset is disclosed by estimation of phase difference and using computations of samples from training symbols computing the carrier frequency offset. See column 17, lines 40-66 and columns 12 and 13. The claimed determining system configuration information based on interburst phase differences is disclosed by training symbols containing phase information that teaches the idea of receiver establishing system configuration through the use of phase information in the training symbols as disclosed in page 9 of specification. See columns 11-13. The claimed amended limitation of determining system configuration information based on interburst differences wherein system configuration comprises at least one of constellation size, code rate, interleaver depth, and RS parity is disclosed by timing metric used to estimate signal-to-noise ratio of first OFDM training symbol which can be used in a WLAN to feed back to the transmitter what data rate will be supported so an appropriate constellation and code can be chosen. See column 17, lines 17-33.

Regarding claims 2, 11, 20, the claimed training symbols used to estimate channel response is disclosed by for timing and frequency synchronization of receiver to OFDM signal relies on training sequence within a frame composed of training symbols as part of OFDM receiver's attempt to acquire signal from transmitter. See column 11, lines 59-67 and column 12, lines 1-38.

Regarding claims 7, 16, the claimed converting frequency domain bursts to time domain bursts is disclosed by IFFT performed on OFDM frequency domain symbols to produce time domain OFDM symbols. See column 2, lines 1-40.

Response to Arguments

4. Applicant's arguments filed 6/4/2004 have been fully considered but they are not persuasive.

Applicant argues amended limitation of determining system configuration information based on interburst differences wherein system configuration comprises at least one of constellation size, code rate, interleaver depth, and RS parity is not disclosed in reference Schmidl. Examiner contends Schmidl discloses timing metric used to estimate signal-to-noise ratio of first OFDM training symbol which can be used in a WLAN to feed back to the transmitter what data rate will be supported so an appropriate constellation and code can be chosen. See column 17, lines 17-33. Examiner believes this teaches limitation of system configuration being constellation size and code rate determined based on training symbols.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the


Art Unit: 2666

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 703-305-8078. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


FRANK DUONG
PRIMARY EXAMINER

MJ

Melanie Jagannathan
Patent Examiner
AU 2666